



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,159	06/20/2000	Katsumi Nakahara	000004.00659	5140
27557	7590	10/21/2003		
BLANK ROME LLP 600 NEW HAMPSHIRE AVENUE, N.W. WASHINGTON, DC 20037			EXAMINER DRUAN, THOMAS J	
			ART UNIT 3724	PAPER NUMBER
			DATE MAILED: 10/21/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/597,159

Applicant(s)

NAKAHARA, KATSUMI

Examiner

Thomas J. Druan, Jr.

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to Applicant's amendment received on 29 July 2003.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '997 in view of JP '998.

JP '997 discloses the invention substantially as claimed including an unset tooth 23, a left set tooth 25L, and a right set tooth 27R (fig. 5). Said teeth have a rake face 15 with a predetermined length A and a curved face 17 with radius B near the tip portion of the saw teeth (fig. 1). Pitches of the saw teeth are unequal with each other (fig. 2). The distance between the rake face and a line parallel to the rake face that passes through the cross position at the bottom-right corner of the curved face 17 is C. The blade has a blade thickness D, a set width T, and a relationship where $T=D+2\alpha$, where α is a setting coefficient. It would have been obvious to one skilled in the art to make the blade thickness of JP '997 less than 0.85 mm to provide a relatively thin general-purpose blade.

JP '997 discloses the invention substantially as claimed, including a distance C between the rake face and a line parallel to the rake face that passes through the bottom-right corner of the curl forming section 17, and a radius B that can be between 0.5 mm and 3.0 mm (column 3, line 35), but lacks the limitation that $R/1.5 < A \leq 2R$. JP

'998 discloses a distance A of 1.0 mm which, for $R=0.5$ mm, lies within the claimed range of 0.75 mm and 1.0 mm (inclusive) in order to produce a desired curling effect of the cut material. Also, discovery of an optimum value for a known process is obvious engineering (*In re Aller*, 105 USPQ 233). Therefore, it would have been obvious to make the dimension C of JP '997 within the claimed range in order to achieve a desired curl.

Response to Arguments

4. Applicant's arguments filed 29 July 2003 have been fully considered but they are not persuasive. Applicant asserts that the claimed invention is not obvious over JP '997 and JP '998 because JP '997 limits the value C (corresponding to A in the claims) to $C \leq (1/2)R$.

Applicant's remarks have been considered; however, it is the examiner's belief that the references make obvious the claimed invention. The Japanese references disclose substantially the same invention, and present figures that are clearly analogous in all aspects except for claimed values. Discovering optimal values is obvious to one skilled in the art of blade designing, and where the general conditions are met, routine experimentation would lead to an optimized design, including values such that $R/1.5 < A \leq 2R$, in order to produce a desired curl in a product cut by the saw blade. If Applicant continues to traverse this rejection, it is suggested that Applicant file an Affidavit concerning the criticality of the values in question, namely the inequality $R/1.5 < A \leq 2R$.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Druan, Jr. whose telephone number is 703-308-4200. The examiner can normally be reached on M-F (8:30-6:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 703-308-1082. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-

1148.

tjd
tjd
10/20/10

AS
Allan N. Shoap
Supervisory Patent Examiner
Group 3700

Application/Control Number: 09/597,159

Page 5

Art Unit: 3724

October 20, 2003
